# MILESTONES

### Revegetation Program Returns Arsenal To Native Prairie

nderstanding that April showers bring May flowers, the USFWS revegetation program adds hundreds of acres of flowers, grasses and shrubs to the Arsenal each year. Having planted more than 3,600 acres to date, the USFWS expects to add, on average, about 700 to 800 revegetation acres per year. The anticipated total by the time the cleanup program is complete is 8,000 acres.

"The exact number of acres changes over time because some remediation projects may be larger or smaller than originally anticipated," said Bruce Hastings, supervisory restoration ecologist. He explained that in most areas, for every one-acre of soil involved in remediation two acres are actually re-seeded.



Acres of soil are prepared for re-vegetatio

Areas are being re-seeded with native plants and grasses since these species are best suited to the local environment. Native plants have root systems that develop into a very thick mat under the surface of the soil. "The roots of these plants protect the soil during droughts and make it harder for harmful weeds to survive," Hastings explained.

A major aspect of the revegetation work is keeping a close watch on weeds to ensure that they don't spread to RMA's neighbors. Restoring the area to native vegetation along with regular mowing will cut down on the spread of weeds.

Carl Mackey, restoration ecologist with the Remediation Venture Office, added that irrigation increases the chances of seed taking root the first time. "Since we've been in a drought, we've cut back the amount of acres

that we're planting with permanent seed mix this year," he said. Only 350 acres will be re-seeded during 2003 unless rainfall amounts increase. The USFWS is only irrigating areas that were seeded last fall to ensure the vegetation has a good chance of taking root, while keeping a close eye on the amount of water that will be available

The Service has seeded 3,661 acres; seeded or planted more than 21 acres of native shrublands; and, along with the Army, has created or restored more than 65 acres of wetlands.

#### North Plants Demolition Nears Completion

Over the past year and a half, environmental cleanup crews have demolished buildings, dismantled equipment, removed old sewer lines and carried out soil remediation in the 150-acre North Plants area. All of the material was taken to the on-site double-lined landfill or the Basin A Consolidation Area depending upon the level of contamination.

With the remediation of the last defunct manufacturing area on RMA, the site has now removed all traces of its manufacturing history. The remediation of the other manufacturing area at RMA, South Plants, was completed in 2002.



Sewer lines are removed from North Plants



Soil remediation in North Plant

#### Sanitary Landfill Remediation Progresses



Sanitary landfill remediation.

RMA continues to make headway on the cleanup of its seven sanitary landfills. Four landfill projects have been completed and two more are in the initial stages of cleanup. The landfill sites consist of trenches and surface disposal areas that were used by the U.S. Army and its contractors as trash disposal sites from the 1940s to

Located in various areas on RMA, the sites primarily contain trash, construction debris, wood, paper, metal piping and contaminated waste. While each sanitary landfill varies in size, the smallest and largest measure 450 and 310,000 cubic yards in size, respectively.

During remediation, all trash, debris and soil are disposed of in the on-site double-lined landfill or the Basin A Consolidation Area, depending on the contamination

level. Once the areas are excavated, the sites are filled with clean soil and re-seeded to blend in with the existing prairie. Remediation of the last landfill will begin in late 2003 or early 2004.

## RMA Celebrates Completion Successes

RMA recently celebrated several notable project completions—Secondary Basin Soil Remediation Part II, Section 35 Soil Remediation and Basin F Exterior Soil Remediation Part I.

Secondary Basin Soil Remediation Part II involved removing soils with low-level contamination that potentially may have an adverse effect on animals. After removal of these soils, the site was graded to remove the edges that created the basins, and one foot of topsoil was added to return the terrain to its pre-RMA contour.



Section 35 soil remeditation

Section 35 Soil Remediation consisted of removing contaminated soils. After completion, the areas were graded for storm water drainage and to allow for revegetation.

Part I of the Basin F Exterior Soils Remediation project wrapped up after nearly one year of work. This project removed contaminated soils adjacent to the former Basin F. Soils in this area were contaminated because of their proximity to the former Basin F operations during the 1960s.



Basin F exterior soil remediation.